

Application No. 10/642,544  
Amendment After Final dated June 9, 2006  
Reply to Final Office Action mailed December 9, 2005

### **REMARKS**

The present Amendment is in response to the Examiner's Final Office Action mailed December 9, 2005. Claims 10, 15-16, 24, 26, and 33-34 are cancelled, claims 1 and 25 are amended, and new claim 35 is added. Claims 1-9, 11-14, 17-23, 25, 27-32, and 35 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

#### **I. PRIOR ART REJECTIONS**

##### **A. Rejection Under 35 U.S.C. § 103**

The Examiner rejects claims 1, 2, 4-6, 8, 10-14, 17-18, 21-22, 24, 25, 27, 28, and 30-31 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* (U.S. Patent No. 6,530,734) in view of *Anthon* (U.S. Patent No. 6,125,222).

Applicants traverse the Examiner's rejection for obviousness on the grounds that the references – either individually or in combination – fail to teach or suggest each and every element of the rejected claims. According to the applicable statute, a claimed invention is unpatentable for obviousness if the differences between it and the prior art “are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a) (2005); *Graham v. John I. Lere Co.*, 383 U.S. 1, 14 (1966); MPEP 2142. Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art, including what the prior art

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teaches explicitly and inherently; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18; *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999). It is the initial burden of the PTO to demonstrate a *prima facie* case of obviousness, which requires the PTO to show that the relied upon references teach or suggest all of the limitations of the claim: MPEP 2142 (emphasis added).

According to MPEP section 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

(Emphasis added).

Claim 1, as amended, recites the element, "wherein said control apparatus is part of a control loop regulating the emitted output wavelength of the laser module at the desired wavelength, with the photon density being measured iteratively and said control apparatus emitting a control command to said adjustment apparatus for adjusting the effective optical path length of said resonator based on a difference between two successive measurements, the amount of adjustment of the effective optical length being proportional to the amount of difference between the two successive measurements...." Support for this amendment can be found, for example, in originally filed claims 1 and 24 as well as on page 15, lines 1-10 of the Applicant's specification.

According to the Examiner on page 5, *Zimmermann* teaches the adjustment of "the effective optical path length of said resonator (col. 8, lines 53-64) based on a difference between two successive measurements (col. 11 lines 31-45, wherein the process of calculating the slope may be done by utilizing the difference between two successive measurements with the well known formula  $(y_2 - y_1)/(x_2 - x_1)$ )." .

However, the Applicant cannot locate the formula " $(y_2 - y_1)/(x_2 - x_1)$ " in col. 1 lines 31-45 of *Zimmermann* relied upon in the Office Action. As such it appears that the Examiner is

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relying on personal knowledge as to what is allegedly well-known and for the required motivation/suggestion. It is well established that the mere fact that something is "well-known" cannot serve as a substitute for motivation. *See In re Spinnovle*, 160 USPQ 237, 238 (CCPA 1969) (emphasis added) ("a patentable invention, within the ambit of 35 U.S.C. §103, may result even if the invention has, in effect, merely combined features, old in the art, for their known purpose, without producing anything beyond the results inherent in their use."); *also see In re Warner*, 154 USPQ 173, 177 (CCPA 1967) which establishes that the question is never simply what is old; rather, the question is the obviousness of bringing the elements claimed in combination together. Accordingly, merely asserting that particular features of the claims are "old" or "well-known" in the art does nothing to establish a reason why the artisan would have been led to combine such features and, thus, does not inherently establish obviousness.

Moreover, the Examiner has not shown that *Zimmermann* teaches an iterative process as set forth in claim 1, wherein "the amount of adjustment of the effective optical length being proportional to the amount of difference between the two successive measurements." Rather, it is unclear, and appears unsupported by concrete evidence of record, how the Examiner has determined that "the process of calculating the slope may be done by utilizing the difference between two successive measurements with the well known formula  $(y_2 - y_1) / (x_2 - x_1)$ ." If the Examiner is relying on the personal knowledge of the Examiner, pursuant to 37 C.F.R. 1.104(d)(2), Applicant hereby respectfully requests an Examiner affidavit that: (i) specifically identifies any and all references(s), other than those that have been specifically cited by the Examiner, upon which the obviousness rejections are based; and (ii) provides complete details concerning the reasoning and analysis of the Examiner concerning those references as those references are purported to apply to the rejection of the claims.

If the origin of teachings and motivation set forth for the proposed combination exists in the references then the Applicants request that this origin be set forth by the Patent Office as suggested by MPEP 2144.08 III which states, "[w]here applicable, the finding should clearly articulate which portions of the reference support any rejection. Explicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection. *Dillon*, 919 F.2d at 693, 16 USPQ2d at 1901; *In re Mills*, 916 F.2d 680, 683, 16 USPQ2d 1430, 1433 (Fed. Cir. 1990). Conclusory statements of similarity or

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motivation, without any articulated rationale or evidentiary support, do not constitute sufficient factual findings.”

Therefore, the Applicants respectfully request that the rejection of claim 1 be withdrawn at least for the reason that the combination of *Zimmermann* and *Anthon* fails to teach or suggest each and every element of claim 1. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As such, the Applicants respectfully request that the rejection of claims 2, 4-6, 8, 10-14, 17-18, 21-22, and 24 be withdrawn at least for the same reasons as claim 1.

Regarding the rejection of claim 18, however, the Applicant notes that claim 1 recites the element, “said lens being disposed between said laser diode and said optical waveguide and being spacially separated from said optical waveguide.” According to the Examiner, in *Zimmermann* “it is inherent that the coupling optics are slightly inclined. (since the optics are directly connected to the fiber, and the fiber system is constantly being thermally adjusted by the heating element, it is inherent that the pitch of both the fiber and lens will be changed such that they are slightly inclined with respect to the laser diode.)” However, “the name of the game is the claim” (*In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)) and the Examiner has ignored the fact that in claim 1, the lens is spacially separated from the optical waveguide as opposed to directly connected to the fiber in *Zimmermann*, and therefore, would not be thermally adjusted as is alleged. Therefore, the inherency argument is inconsistent with the combination of elements set forth in claim 1.

Moreover, “Inherency ... may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1269, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). The Applicant disagrees with the Examiner’s assertion on page 6 of the Office Action that “the pitch of both the fiber and lens will be changed such that they are slightly inclined with respect to the laser diode”. This characterization does not appear to be supported by *Zimmermann* and the portion of *Kapany* relied upon does not appear to remedy the deficiencies in *Zimmermann*. Thus, it again appears that the Examiner is relying on personal knowledge. As such, the Applicants respectfully request an Examiner Affidavit pursuant to 37 C.F.R.

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1.104(d)(2) so that the Applicants can understand the source of rationale upon which the rejection is based.

Regarding claims 25, 27, 28, and 30-31, the Applicant is confused how the Examiner has failed to give the claims patentable weight, and second how the Examiner has construed these claims as "product-by-process" claims when the preamble clearly defines the claimed subject matter as a process. Applicants have the option of drafting either method or apparatus claims; and method claims are not to be interpreted as product-by-process claims. *See Aro Manufacturing Co. v. Convertible Top Replacement Co.*, 465 U.S. 336, 329 (1961). Claims 25, 27, 28, and 30-31 set forth process elements of a method, which are a different statutory subject matter than apparatus elements, such as product-by-process elements. While a structure may be claimed in one claim, a step or act of a process may not require the same structure, and vice-versa. Therefore, Applicants respectfully disagree with the Patent Office that claims 25, 27, 28, and 30-31 are "not germane to the patentability of the device itself." As such, claim 25 cannot be rejected by simply citing to the rejection of claim 1 because they claim different statutory subject matter under 35 USC § 101. Applicants respectfully request that the rejection of claims 25, 27, 28, and 30-31 be withdrawn at least for the reason that the Patent Office has not carried its burden required for a *prima facie* case of obviousness with respect to these claims. *See* MPEP 2143.03.

Notwithstanding the above deficiencies in the rejections, claim 25 as amended recites the element "repeating steps b) to g) regularly throughout a life of the laser module to calibrate the output wavelength." On page 11 of the Office Action, the Examiner relies upon cited case law, *In re Dilnot*, 319 F.2d 188 (CCPA 1963) to allege that it would have been obvious to monitor and adjust the laser module for any desired length of time to reject claim 26. The elements of claim 26 have been incorporated into claim 25 by this paper.

Where the Examiner relies on legal precedent to support the rejection, the Examiner must show that the facts in the prior legal decision are sufficiently similar to those in this application. MPEP 2144.04. As described in detail in the Applicant's specification, changes in a laser's characteristics are related to aging of the laser diode along with changes caused by environmental conditions, such as ambient temperature and mechanical stresses. *See* page 3, line

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22 - page 4, line 2; page 7, lines 17-20; page 22, lines 1-10 of the Applicant's disclosure. The facts of *In re Dilnot* related to introduction of a stable air foam into a slurry of cementitious material, which appears quite distinct from recognition of changing performance characteristics and compensation for aging of a laser diode over time. Thus, the Examiner has not shown that the facts of *In re Dilnot* are the same as presented here and, as such, the rejection of claim 25 should be withdrawn. As described above if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. Therefore, the Applicants respectfully request that the rejection of claims 27, 28, and 30-31 be withdrawn at least for the same reasons as claim 25.

The Examiner rejects claims 3 and 7 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* in view of *Tomlinson et al.* (U.S. Patent Application Pub. No. US 2003/0435449). Claims 3 and 7 depend from claim 1. As described above if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. Therefore, the Applicants respectfully request that the rejection of claims 3 and 7 be withdrawn at least for the same reasons as claim 1.

The Examiner rejects claims 9, 23, 29, and 32 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann* in view of *Daiber et al.* (U.S. Patent Application Pub. No. US 2003/0012239). Claims 9 and 23 depend from claim 1 and claims 29 and 32 depend from claim 25. As described above if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. As such, the Applicants respectfully request that the rejection of claims 9, 23, 29, and 32 be withdrawn at least for the same reasons as claims 1 and 25. Moreover, regarding the rejection of claims 29 and 32 see the discussion of claim 25, 27, 28, and 30-31 above.

The Examiner rejects claims 19, 20, and 26 under 35 U.S.C. § 103 as being unpatentable over *Zimmermann*. Claims 19 and 20 depend from claim 1 and claim 26 depends from claim 25. As described above if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. As such, the Applicants respectfully request that the

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rejection of claims 19, 20, and 26 be withdrawn at least for the same reasons as claim 1 and 25. Moreover, regarding the rejection of claim 26 see the discussion of claims 25, 27, 28, and 30-31 above.

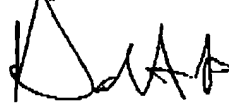
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### CONCLUSION

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 9 day of June, 2006.

Respectfully submitted,



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